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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John W. Linebarger

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EXAMINER

PAYNE, DAVID C

ART UNIT

PAPER NUMBER

2633

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DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,517

Applicant(s)

LINEBARGER ET AL.

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 7, 9, 10, 18 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheong et al. US 6,477,154 B1 (Cheong).

Regarding claim(s) 1, 9, 32

Cheong disclosed (Figure 1, e.g., col./line: 4/1-25, 6/15-25)

A method for transmitting signals comprising:

transmitting a data signal (ATM NETWORK) over a first wavelength (λ_1) on a single fiber strand;

and

transmitting a radio frequency (LMDS transceiver) signal over a second wavelength on the same single fiber strand.

Regarding claim(s) 2, 3, 4, 5, 18

Cheong disclosed (Figure 3 or 4, page 14, paragraph 0091) transmitting a plurality of data and RF signals

(Figure 1, e.g., col./line: 4/1-25, 6/15-25) over multiple wavelengths;

and transmitting a plurality of other radio frequency signals (CELLULAR NETWORK, PCS) F over a second wavelength.

Regarding claim(s) 7

Cheong disclosed wherein the data signal comprises an asynchronous signal (Figure 1, 106).

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Regarding claim(s) 10

Cheong disclosed transporting PCS signals over an optical infrastructure

(e.g., col./line: 4/40-47).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheong et al. US 6,477,154 B1 (Cheong) in view of Bloom US 6,104,513 (Bloom).

Regarding claim(s) 6

Cheong does not disclose wherein the data signal comprises an Ethernet based signal.

Bloom disclosed the use of Ethernet data signals (e.g., col./line: 2/25-30). It would have been obvious to one of ordinary skill in the art at the time of invention to use Ethernet data equipment so that all users can access the without interference with each other as disclosed by Bloom, see passage above.

5. Claims 8, 11, 12, 19, 20, 22-24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheong et al. US 6,477,154 B1 (Cheong).

Regarding claim(s) 11 and 12,

Cheong disclosed an infrastructure that is at once a local multipoint distribution system (Figure 1, LMDS)

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but does not disclose that a multipoint multi-channel distribution service signal (MMDS) given that a plurality of services from a service node are distributed to a number of users over multiple wavelengths.

It would have been obvious to one of ordinary skill in the art at the time of invention MMDS is an alternative system for transmitting RF signals, since the main difference between LMDS and MMDS is the cost to build out. Where the former includes a narrow depth of coverage, one MMDS site can cover a larger geographic area.

Regarding claim(s) 8

Cheong does not disclose that the data signal comprises a synchronous optical network based signal. However, Cheong does disclose that the system incorporates a public switched telephone network. It would have been obvious to one of ordinary skill in the art at the time of invention the long practice of modern public networks to use synchronous optical networks for the benefit of a hierarchical multiplexing high-speed transmission means (e.g., col./line: 4/35-40).

Regarding claim(s) 19

Cheong does not disclose a first and second node transmitting data and radio frequency signals exactly as claimed. However, Cheong does disclose that the individual nodes, e.g., (109-1) and (109-2) transmit the data and RF signals over different wavelengths. It would have been obvious to one of ordinary skill in the art at the time of invention that the nodes would be configured to transmit data and RF over similar corresponding wavelengths for the benefit of reduced wavelength assignment for similar functions in the network and aggregating similar signals in the network a common service points.

Regarding claim 20, 24

Cheong disclosed a switch/cross connect (Fig. 1 #101) fiber optic transmitter (Fig. 2 #213) and fiber optic receiver (Cheong).

Regarding claim 23, 27

while Cheong does not describe the node (Fig. 2, page 11 paragraph 0075) as a service node and point of

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presence, it would have been obvious to one of ordinary skill in the art at the time of invention that the node functions as the applicant has claimed since it is a central distribution a number of servers of telephony, computer and video services.

Regarding claim 22, 26

The Cheong optical transceivers (Fig. 2 #213) transmit mixed traffic by definition since the transmitter transmits both data and RF signals over WDM.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheong et al. US 6,477,154 B1 (Cheong) in view of Cyr et al. US 6,223,055 B1 (Cyr).

Regarding claim(s) 13

Cheong does not disclose

wherein the radio frequency signal comprises unlicensed radio frequency spectrum signal.

Cyr disclosed unlicensed radio frequency spectrum use in a networked environment (e.g., col./line: 5/15-25).

It would have been obvious to one of ordinary skill in the art at the time of invention to route unlicensed radio spectrum over the Cheong infrastructure for providing ubiquitous service to all user groups. Furthermore, Cyr disclosed in the same passage the large number of customers who have access to this type of service. The combination of the two merely provides another access mechanism to a larger group of customers who might take other data services on the Cheong infrastructure.

7. Claims 14-17, 21, 25, 28-31, and 33- 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheong et al. US 6,477,154 B1 (Cheong) in view of Motley et al. US (Motley).

Regarding claim 21, 25, 33

Cheong does not disclose data and radio switch matrices.

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Motley disclosed

Cheong does disclosed data matrices (Fig. 2a) and radio matrices (Fig. 2b). It would have been obvious to one of ordinary skill in the art at the time of invention to route signals over matrices as such to interconnect different ends of the system to different subscribers.

Regarding claim(s) 14-17, 28-31, 34-37, and 39-42

The modified invention of Cheong and Motley disclosed cross-connecting data or radio frequencies between wavelengths or paths (e.g. Cheong, col./line: 4/1-25, 6/15-25).

Regarding claim 38,

While the modified invention of Cheong and Motley does not disclose using a jumper in the switch, it would have been obvious to one of ordinary skill in the art the time of invention that jumpers can be used to connect points in a cross point switch. The principle of connecting endpoints in a switch is extremely well known in the art and does not constitute patentable subject matter.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp


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